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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/000,283 | 11/15/2001 | Karl-Werner Dorr | 20496-290 | 9006 |

21890 7590 10/06/2003

PROSKAUER ROSE LLP
PATENT DEPARTMENT
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EXAMINER

SLACK, NAKO N

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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3635

DATE MAILED: 10/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/000,283

Applicant(s)

DORR ET AL.

Examiner

Naoko Slack

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 May 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) 1-4 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 5,6 and 8 is/are rejected.
- 7) ☒ Claim(s) 7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

In view of applicant's amendment, claims 1-4 have been cancelled and replaced with claims 5-8. References listed on the Supplemental Information Disclosure Statement have been considered. Corrections to the Specification are approved.

Applicant argues that prior art Japanese Patent 10219949A "does not allow the transfer of the heat of the solar panel because of the presence of a space (6) at the rear side of the solar panel" (page 8, lines 14-15). However, this feature, namely "the transfer of the heat of the solar panel," is not specified in any of the claims.

Applicant also argues that prior art Japanese Patent 10219949A fails to disclose "an electrical cable passing through a sealed bore in the sheet metal panel" (page 8, lines 16-17). An updated search was conducted for this particular feature.

Claim Objection

Claim 5 is objected for the following reason: on line 3, "shees" should be
- - sheets - -. Correction is required.

Claim Rejections – 35 USC 103

The following is a quotation of 35 USC 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary

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skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5 and 8 are rejected under 35 USC 103(a) as being unpatentable over Japanese Patent 10219949A (JP '949) in view of US Patent 5,409,549A to Mori and Japanese Patent 11280223A to Nishio et al.

Claims 5 and 8:

JP '949 discloses a sheet metal panel for a roof covering comprising first and second sheets, an intermediate layer made from a thermal insulating material disposed between the first and second cover sheets, and a photovoltaic element attached to the second cover sheet with fastening means. While JP '949 fails to disclose that the fastening means is a cold-bonding adhesive, Mori discloses solar cell roof panel comprising a solar cell is directly attached to the roof panel with double-sided adhesive tape (column 2, lines 1-3). Benefits include lower cost, ease of installation, and long term reliability. In view of Mori, it would have been obvious for one of ordinary skill in the art at the time the invention was made to use double-sided adhesive tape to attach the solar panel of JP '949 to the roof panel for facilitating installation, as JP '494 is concerned with shortening the installation time (page 1 of English abstract, line 2 from the bottom).

JP '494 also fails to disclose an electrical cable connected to the solar cell and extending through a sealed bore in the sheet metal roof panel. However, Nishio et al. teaches a solar panel whose rails are provided with holes for the electrical wiring, and the holes are water-sealed by rubber packings (page 2 of English abstract, lines 2-7). In view of Nishio et al., it would have been obvious for one of ordinary skill in the art at the time the invention was made to direct the wiring of JP 494's solar panel through sealed holes in the

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roof panel for protection of the wiring and efficiency of the installation. JP '494' is concerned with both providing a watertight solar roof panel assembly and enabling an efficient installation (last two lines of English abstract).

Claim 6 is rejected under 35 USC 103(a) as being unpatentable over Japanese Patent 10219949A in view of US Patent 5,409,549A to Mori and Japanese Patent 11280223A to Nishio et al. as applied to claim 5 above, and further in view of US Patent 5,849,107A to Itoyama et al.

While JP '949 fails to specify that the plane photovoltaic element comprises amorphous silicon cells, Itoyama et al. discloses a solar roof module that uses an amorphous silicon solar cell (column 7, lines 47-50) for the benefit of heat transfer efficiency. In view of Itoyama et al., it would have been obvious for one of ordinary skill in the art at the time the invention was made to use a solar panel with amorphous silicon cells for improving the efficiency of the solar cell.

Allowable Subject Matter

Claim 7 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

While solar units mounted on metal panels are known in the art, prior art fails to show a flexible laminated solar cold-bonded to the metal panel with a layer of bituminous material. The closest prior art belongs to the Kalzip Publication which discloses a cold-bond self-adhesive bituminous layer used on metal roof panels for providing a vapor barrier.

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Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Naoko Slack whose telephone number is (703) 305-0315. The examiner can normally be reached on Mon-Fri (6:00 am-2:30pm EST). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor Carl D. Friedman can be reached at (703) 308-0839. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9326 for regular communications and (703) 872-9327 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.



NS

September 29, 2003